AOML Keynotes

Miami, Florida

November 1999 | Atlantic Oceanographic and Meteorological Laboratory | Volume 3, Number 11

Office of Oceanic and Atmospheric Research

Reorganization Update

NOAA's Office of Oceanic and Atmospheric Research (OAR) has undergone a reorganization. As part of this process, the Environmental Research Laboratories, the level of hierarchy directly above AOML, has been abolished. As of October 1, 1999, AOML reports directly to OAR Headquarters as one of its research laboratories. All mention of "Environmental Research Laboratories" should be removed from mailing addresses, letterhead stationery, etc.

Summary booklets outlining the OAR reorganization, including the names and coordinates of individuals selected to fill various positions (as far as they have been selected to date), are available from each AOML Division office. Additional information about the new OAR structure, plus functional statements for the reorganized offices of OAR, can be found at http://www.oarhq.noaa.gov.

AOML's new liaisons to OAR Headquarters include:

Dr. David L. Stein
Ms. Kristen C. Koch (alternate)

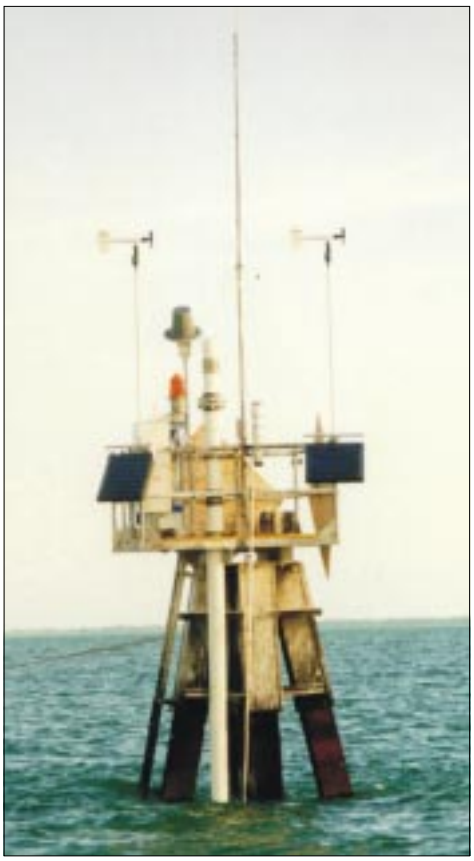
Office of Scientific Support
Ocean Resources Team

Veterans Day
November 11, 1999

NOAA Research Supports Fragile Florida Bay Ecosystem

DawnMarie Welcher, NOAA Corps, Executive Director, SFERPM

Florida Bay is a triangularly shaped body of water approximately 2200 km^2 in area, bordered on the north by the Florida Everglades and on the east/southeast by the Florida Keys. Although the Bay is the principal inshore nursery for the offshore Tortugas pink shrimp and also supports numerous protected species such as the bottle-nosed dolphin and the American crocodile, frequent seagrass dieoffs, atypical algal blooms, and a decline in fishing success are all indications that the environmental health of Florida Bay has deteriorated. While the causes of the various problems and the relationships between them are not well understood, there is no question that the coastal marine ecosystem of Florida Bay is in jeopardy.



C-MAN/SEAKEYS stations transmit real-time oceanographic and meteorological data.

Unfortunately, more freshwater alone will not return Florida Bay to pristine condition. The timing, location, and quality of freshwater released to the Bay must also be considered but, at present, there is insufficient scientific knowledge to predict with confidence the consequences of anticipated alterations in freshwater input to Florida Bay. To provide this scientific information, a dozen federal and state agencies have been collaborating in an Interagency Florida Bay Science Program. Although NOAA is a comparatively small player within the overall South Florida Ecosystem Restoration effort, it is the largest supporter of coastal ecosystem science in the region and has been a leader within this interagency program since its inception in 1994.

NOAA's South Florida Ecosystem Restoration Prediction and Modeling (SFERPM) program is locally managed with offices at both AOML and the Florida Bay Interagency Science Center in Key Largo to ensure the closest possible integration with our state and federal partners. With nearly $4.0M in funds annually provided by (*continued on page 2*)

(*continued on page 1*)

three different NOAA line organizations and various state and federal partners, SFERPM has not only supported research projects as well as operational monitoring and modeling, but has also maintained the interagency science program web site (http://www.aoml.noaa.gov/flbay) and electronic mail lists. SFERPM also leads the interagency program's physical science research team, data management program, and sponsors its outreach and educational efforts. SFERPM's local managers not only serve on the Interagency Florida Bay Science Program Management Committee, but also represent it in the South Florida Ecosystem Restoration Working Group and Science Coordination Team. Local leadership has assured optimal resource allocation, integration of NOAA and other agency contributions, and timely delivery of critical technical information to restoration managers including the Florida Keys National Marine Sanctuary. More information on the SFERPM program can be found at http://www.aoml.noaa.gov/ocd/sferpm.

In a Playful Mood?

AOML's Holiday Ensemble Needs You!

Instrumentalists and singers welcome - all levels!

First-Floor Conference Room

Wednesdays, 11:30-12:30

Begins November 3, 1999

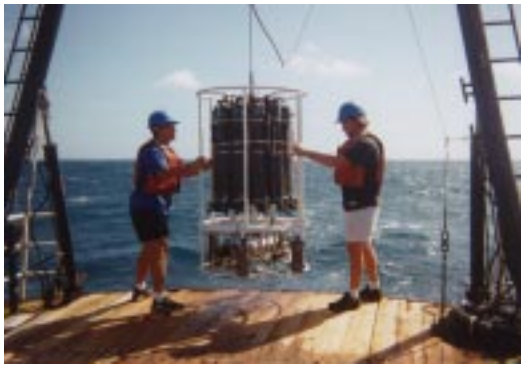
Contact Jack Stamates for more information

(305-361-4317 or stamates@aoml.noaa.gov)

NOAA/UM Scientists Monitor Florida Bay Circulation

Doug Wilson, Elizabeth Johns, Ryan Smith (Physical Oceanography Division)/Thomas Lee, Elizabeth Williams (RSMAS, Meteorology and Physical Oceanography Division)

As part of the Florida Bay Circulation and Exchange Project (funded by SFERMP), a physical oceanographic study of the circulation of Florida Bay and its connection with the surrounding waters of the Gulf of Mexico, the southwest Florida shelf, and the Atlantic Ocean is presently underway by scientists from AOML's Physical Oceanography Division and the University of Miami's Rosenstiel School of Marine and Atmospheric Science. The measurement program includes moored arrays equipped with current meters, bottom pressure sensors and conductivity/temperature (CT)/depth (CTD) sensors, satellite-tracked surface drifters, a shipboard acoustic Doppler current profiler (ADCP) (to measure volume transport through the channels between the Florida Keys), and bimonthly interdisciplinary shipboard surveys with continuous underway thermosalinograph observations of surface salinity, temperature, and fluorescence.



Technicians from AOML's Physical Oceanography Division prepare to deploy a CTD instrument from the University of Miami's research vessel *Calanus*.

The moored CT array consists of 20 sensors positioned from the Florida Keys reef tract, through Florida Bay and around Cape Sable, extending northward off the mouths of the Shark, Broad, and Lostmans Rivers, to Indian Key just south of Marco Island, Florida. The array is designed to resolve the three-dimensional structure of the river plumes, with emphasis on Shark River. In addition to the CT moorings, four moored upward-looking ADCPs are positioned west of Lostmans River and Cape Sable, with the offshore pair located 30 nautical miles west of the southwest Florida coast. The ADCPs provide a continuous measure of currents and, paired with data from the other moored instrumentation, will allow a quantitative analysis of freshwater discharge. Bottom pressure sensors are included on the moorings 30 nautical miles offshore of Cape Sable, adjacent to Cape Sable, in western Florida Bay, and in the Atlantic, offshore of Long Key, Florida. From these instruments a continuous measurement of sea level height and the slope of the sea surface can be obtained. The bulk of the array was deployed in September 1997 and is maintained to the present time.

Results from the moored array will be compared with wind fields obtained from the array of CMAN weather stations, as well as rainfall gauge and river flow data, to determine the meteorological forcing mechanisms which drive the river plume dispersion. Preliminary results of such comparisons have indicated that the dispersion is highly variable, strongly correlated with both wind and rainfall patterns, with the rainfall determining the size of the freshwater plumes on a daily-to-weekly time scale, and the wind fields determining the direction of dispersion.

Left: Physical Oceanography Division staff begin the arduous task of removing marine growth from a conductivity-temperature (CT) recorder affixed to a Coast Guard Marker off Northwest Cape, Cape Sable. This instrument, part of an array that spreads throughout the Florida Keys, Florida Bay, and the Southwest Florida shelf, will help scientists determine how freshwater outflow from the Everglades interacts with the marine environments of the Gulf of Mexico, Florida Bay, and the Florida Straits. Deployed in late 1997, the array includes ADCP, CT, and CTD moorings. Keeping instruments free of marine growth is an important and ongoing task. Instruments require cleaning and replacement at regular intervals or data quality will suffer. Right: A CT recorder as it appears when first deployed, before marine growth accumulates.

Combined Federal Campaign

The deadline for enrolling in the 1999 Combined Federal Campaign Program is November 30, 1999

CFC booklets and enrollment forms are available in the lobby

Contact Jannette Perez for more information

(305-361-4367 or perez@aoml.noaa.gov)

CPR/First Aid Training Classes

November 4, 1999

CPR: 8:00-11:45 a.m.

First Aid: 12:45-2:45 p.m.

First-Floor Conference Room

Contact Kristie Miller to register or for more information (305-361-4544 or miller@aoml.noaa.gov)

AOML Diversity News

Sim Aberson, Hurricane Research Division

In the spring of 1999, I was appointed to the NOAA Diversity Council as an OAR employee representative. The Council leads the effort to manage diversity within NOAA, and implement the NOAA Diversity Plan, including the SFA (Survey/Feedback/Action).

I will periodically write short articles for *Keynotes* concerning diversity management at AOML and in NOAA. Affirmative Action (AA), Equal Employment Opportunity (EEO), Understanding Differences, and Diversity Management are sometimes confused. Therefore, I would like this first note to provide definitions for various terms so everyone has a better understanding of what the diversity initiative is trying to accomplish.

AA is an effort to remedy underrepresentation due to past discrimination of women, Blacks, Hispanics, Asian/Pacific Islanders, Native Americans, and people with disabilities. The goal of AA is to create a workforce that mirrors the civilian labor force and to provide upward mobility for these specific classes of employees. This effort involves goals, not quotas, except in the case of court orders.

EEO is the law that prohibits discrimination in employment decisions based on race, color, national origin, gender, disability, religion, age, and sexual orientation.

Understanding differences involves efforts to foster awareness and acceptance of different values, behaviors, and cultures that men and women, blacks and whites, and other groups bring to the workplace. They focus on challenging stereotypes, increasing understanding of the nature and dynamics of individual differences, reducing conflict, and addressing racism and sexism.

Managing diversity is a process for creating and maintaining an environment and organizational culture that allows all employees to contribute and reach their full potential in pursuit of organizational goals and objectives. Managing diversity focuses on systems, policies, practices, procedures, and people.

For example, while the different groups mentioned in EEO and AA are elements of diversity, other important elements in AOML involve oceanography/meteorology, scientific support staff/principal investigators, and non-scientific/scientific staff. Another diversity element which affects us all is NOAA field offices/headquarters. Surely, there are many other diversity elements that may impact the work of laboratory employees. It is the goal of diversity management to improve the workplace by dealing with these differences.

In the future, I will be writing about different efforts to create a more valued and diverse workforce. If anyone would like to discuss the diversity efforts with me, or has issues that should be brought to the attention of the NOAA Diversity Office, please see or call me. I have a number of documents and interesting books concerning the philosophy of Diversity Management in NOAA, and hope that this column and these resources will be useful to us as we proceed to build a better workplace for us all.

Open Season

Federal Health Benefits Program (FEHBP)
(November 8-December 13, 1999)

Thrift Savings Program (TSP)
(November 15, 1999-January 31, 2000)

Changes to either the FEHBP or TSP programs must be made through Employee Express:

From Home: 1-800-827-6281
From Work: 1-912-757-3083
Internet: http://www.employeeexpress.gov

It's a Boy!

Congratulations to Robert Rogers, meteorologist with the Hurricane Research Division, and his wife Jennifer, on the birth of their son, Jonathan Dalton Rogers, born Thursday, October 30, 1999 at South Miami Hospital. Jonathan weighed in at 6 pounds, 3 ounces.

Welcome Aboard

Richard Archange joins the Office of the Director's Facility Management Group to assist with custodial and maintenance responsibilities.

James Haynes joins the staff of the Computer Networks and Services Division as a Computer Trainee to assist with maintenance of printers and personal computers.

NOAA Corps officer LCDR John Steger joins the staff of the Physical Oceanography Division to assist with GOOS Center managerial and project activities.

George Sariego joins the staff of the Office of the Director to assist with the new OAR Financial Management System (FDMS) deployment. George will also process GBLs and perform other administrative duties.

Daniel Voss joins the staff of the Ocean Chemistry Division as a CIMAS Graduate Student to assist Dr. Kelly Goodwin in her laboratory. Dan is a RSMAS student in the Division of Marine and Atmospheric Chemistry. His proposed Ph.D. thesis project involves bacterial degradation of polyaromatic hydrocarbons (PAHs). He plans to determine how the photochemistry of PAHs affect their biodegradation.

Farewell

Jeffrey Bufkin, Electronics Technician with the Ocean Acoustics Division, resigned on November 5, 1999 after nine years of employment at AOML. Jeff has accepted an Electronics Engineering position with the Air Armament Center at Eglin Air Force Base near Ft. Walton Beach, Florida where he'll review prototype electronic systems for safety considerations. In his absence, Charles Lauter, retired Electronics Technician formerly with the Ocean Acoustics Division, has returned to OAD until January 2000 to assist the Division with electronics support.

Mike Minton Retires

Mike Minton, Computer Systems Analyst for the Physical Oceanography Division, retired from federal service on October 31, 1999 after a career spanning more than 30 years. Mike began working at AOML in January 1974 as a Research Oceanographer. After completing a Master's Degree in computer science from the University of Miami in 1980, he became a Computer Systems Analyst for PhOD. Mike and his wife, Elizabeth, will reside in the town of Longwood, Florida. He will continue working as a part-time consultant for PhOD via the Cooperative Institute for Marine and Atmospheric Studies, assisting with GOOS Center projects and activities.

HRD Team Wins NOAATech 2000 Conference Award

Mark Powell, Hurricane Research Division

Shirley Murillo, Nirva Morisseau-Leroy, and Sonia Otero, representing AOML's Hurricane Research Division, won the Best JAVA Implementation Award at the NOAATech 2000 Conference held in Silver Spring, Maryland on October 19-21, 1999. NOAATech 2000 showcased NOAA's technological advancements in high-end networks and web-based applications. Sponsors included NOAA's Office of High Performance Computing and Communications (HPCC) and the NOAA Network Advisory Review Board.

Shirley Murillo, Nirva Morisseau-Leroy, and Sonia Otero, winners of the Best JAVA Implementation Award at the NOAATech 2000 Conference, with Bill Turnbull, Deputy Director of NOAA's Office of High Performance Computing and Communications.

Despite formidable competition from much larger and better funded teams from the Pacific Marine Environmental Laboratory, Forecast Systems Laboratory, the National Severe Storms Laboratory, Geophysical Fluid Dynamics Laboratory, and the University of Wisconsin (among others), HRD's team won the coveted award with their presentation entitled "A Distributed, Real-Time Hurricane Wind Analysis System."

Shirley, Nirva, and Sonia worked extremely hard to win the award, with many strategy and practice sessions leading up to the conference. During their presentation, they connected to AOML's Oracle Database and graphically interacted with observations on the stage screen, delivering a flawless demonstration depicting observations and the resulting wind analysis of Hurricane Floyd. This is a tremendous accomplishment for a small team of scientists willing to take risks in using cutting-edge technology to help solve problems in hurricane wind field assessment. Congratulations to Shirley, Nirva, and Sonia.

Telephone books (White and Yellow Pages) for the period October 1999-2000 are available for pickup in the loading dock area on the first floor. Please bring old telephone books to the loading dock area for recycling. The deadline for dropping off old books and picking up new ones is November 12, 1999.

Happy Thanksgiving

(Courtesy of Mother Nature)

Those working late in the afternoon at AOML on October 19, 1999 were treated to a magnificent sunset. For close to an hour as the sun dipped below the horizon, an ever changing kaleidoscope of brilliant color filled the sky. Office of the Director executive secretary Gladys Medina, viewing the sunset from the vantage point of her fifth-floor window, was simply amazed. "I've never seen anything like it before, it was just incredible. Every color of the rainbow appeared." The phenomenon, appropriately named iridescence, occurs when sunlight passes through water droplets or ice needles in a location near the sun. The color will vary with distance from the sun if the water droplet size is consistent throughout the cloud but can also vary if drop size varies. Usually, iridescent clouds go unnoticed because of the brightness of the sun, but in this case the cumulonimbus clouds below them blocked the sun and allowed for this spectacular display. To learn more about iridescence and other optical phenomena in the sky, see M.G.J. Minnaert, *Light and Color in the Outdoors* (fifth edition), Springer-Verlag, 1974. These photos were taken on the roof of the AOML facility by John Gamache. The complete set of John's photos can be obtained at ftp://ftp.aoml.noaa.gov/hrd/pub/gamache/iridescence.

Travel

Elizabeth Johns, Peter Ortner, and DawnMarie Welcher will attend the 1999 Florida Bay Science Conference in Florida City, Florida on November 1-5, 1999.

Stanley Goldenberg and Alberto Mestas-Nuñez will attend the 24th Annual Climate Diagnostics and Prediction Workshop in Tuscon, Arizona on November 1-5, 1999.

Judy Gray will attend the American Meteorological Society's Third Conference on Coastal Prediction in New Orleans, Louisiana on November 3-5, 1999.

John Proni will attend a Department of Defense sponsored conference entitled "The Role of Militaries in Protecting the World's Bodies of Water" at the U.S. Army War College in Carlisle, Pennsylvania on November 3-5, 1999.

Kristina Katsaros will attend the Quadrennial Review of the Geophysical Fluid Dynamics Laboratory in Princeton, New Jersey on November 8-9, 1999

Doug Wilson, Elizabeth Johns, Ryan Smith, and Christopher Landsea will attend the Intra-Americas Sea Initiative (IASI) First Biennial IASI Science Meeting in Panama City, Panama on November 8-12, 1999.

Mark Powell will attend a workshop on wind damage held by the Risk Prediction Institute of the Bermuda Biological Station for Research on November 8-10, 1999.

Gregg Thomas will participate in a thermosalinograph calibration cruise aboard the BCL Container vessel *Oleander*, which maintains a weekly run between Port Elizabeth, New Jersey, and Hamilton, Bermuda, on November 12-18, 1999.

Hugh Willoughby will attend the American Association for Wind Engineering symposium "Reducing Losses from Wind Storms: Hidden Dangers in New and Existing Construction" on November 18-19, 1999 in Washington, D.C.

VOLUNTEERS NEEDED!

SCIENCE AND ENVIRONMENTAL AWARENESS (SEA) BOWL
(JANUARY 29, 2000)

3RD ANNUAL NATIONAL OCEAN SCIENCES BOWL SOUTH FLORIDA REGIONAL COMPETITION
(FEBRUARY 26-27, 2000)

Both events are science-based, "jeopardy"-styled competitions for high school student teams from Dade, Broward, Palm Beach, and Monroe Counties

AOML volunteers are needed for judging teams (teams consist of a moderator, scientific judge, scorekeeper, rules judge, and timekeeper)

Contact Erica Van Coverden
(305-361-4541 or coverden@aoml.noaa.gov)

Happy Halloween

Armando Cuervo, Jannette Perez, George Sariego, Erica Van Coverden, Charles Featherstone, and Alejandra Lorenzo, members of AOML's Inter-Dimensional Galactic Committee, meet to discuss issues of national security and universal significance.

Keynotes is published monthly by the Atlantic Oceanographic and Meteorological Laboratory. Contributions should be submitted prior to the last week of each month to ensure inclusion in the following month's edition. Please address all correspondence to: Office of the Director, 4301 Rickenbacker Causeway, Miami, FL 33149. Contributions may also be submitted by fax at (305) 361-4421 or by email (derr@aoml.noaa.gov).

Editor – Kristina Katsaros
Publishing Editor – Gail Derr

The deadline for submitting material for the December issue of *Keynotes* is Friday, November 19, 1999.

Keynotes can be viewed in PDF format at the following World-Wide Web Internet address:
http://www.aoml.noaa.gov/keynotes